

Institute of Chemical Engineering

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The enrichment of ventilation air methane by membrane separation

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Abstract: The basic aim of this study was to analyze the possibility of using commercial membrane modules in the recovery of methane from ventilation air. Experimental investigations concerning the separation of gaseous mixture containing 0.3 vol.% of methane in nitrogen were carried out. However, no satisfactory increase in methane concentration was observed in the product in a single-step installation. Therefore, a multi-step membrane system was proposed with UMS-A5 module. It was found that the developed mathematical model can be used for design calculations and optimization in the enrichment of lean methane-nitrogen mixtures.

Attachments:

[Zeszyt-21-2017](#) pdf, 3.74 MB

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